



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,301	06/18/2001	Sylvain Joyeau	1807.1033	6878

5514 7590 01/07/2004

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

CHEN, ALAN S

ART UNIT	PAPER NUMBER
----------	--------------

2182

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,301

Applicant(s)

JOYEAU ET AL.

Examiner

Alan S Chen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-30, 33-37, 40 and 41 is/are rejected.
- 7) ☒ Claim(s) 31, 32, 38 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/21/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

EXAMINER'S AMENDMENT

Response to Arguments

1. Applicant's arguments filed 11/21/2003 have been fully considered but they are not persuasive. Applicant argues the following: No. 5,444,853 to Lentz (hereafter Lentz) does not teach or disclose the feature of modifying received data according to at least one predetermined criterion corresponding to the address of the virtual interface.

Lentz does indeed teach and disclose such a technique. One such teaching by Lentz is his technique in modifying the received data in terms of the where it is stored. Fig. 8 summarizes the start address strategy. In one example (Fig. 8, element 810), if the amount space designated by the start address and end address is too small based on the amount of data that to be DMAed, the received data can be modified such that it is placed in a separate physical location that makes the space larger corresponding to the start address of the virtual interface. Hence, the data received by the virtual FIFO is modified according to at least one predetermined criterion corresponding to the address of the virtual interface.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 27-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Lentz.

4. As per claims 27, 34 and 41, Lentz discloses a device, method, and computer executable program (Fig. 4) for sharing and controlling access to at least one peripheral (Fig. 4, element

Art Unit: 2182

401) for a computer system which includes a central processing unit (Fig. 4, element 126) and the at least one peripheral (Fig. 4, element 401) which has a physical interface to the CPU (Fig. 4, element 404), the device comprising: request reception means for receiving a request for access to an address of a virtual interface, wherein the address of the virtual interface corresponds to the physical interface (the various virtual FIFOs in Fig. 4 correspond to physical system memory locations); data reception means for receiving data exchanged between the CPU and the at least one peripheral (Fig. 4, element 404) DMA controller; and modification means for modifying the data received by said data reception means, according to at least one predetermined criterion corresponding to the address of the virtual interface (Fig 8). Note firmware/BIOS contains the instructions (e.g., code) for computer operations, e.g., how to operate controllers in system.

5. As per claims 28 and 35, Lentz discloses claims 27 and 34, respectively, further comprising: a memory space reserved for the physical interface (Fig. 4, elements 102 and 402), wherein said memory space is peculiar to an application executed by the computer system (DMA controller in Fig. 4, is used for applications that avoid using CPU time because it is expensive to do so; applications involving graphics cards and data storage devices belong to such application categories); and linking means for linking an address of the memory space (Fig. 4, element 102 is allocated memory space) to an address of the physical interface (Fig. 4, element 402).

6. As per claims 29 and 36, Lentz discloses claims 27 and 34, respectively, further comprising a first interface with a bus connected to the central processing unit (Fig. 4, element 428 and 430, multiple signals inherently means multiple wires/signal conduits, which by

Art Unit: 2182

definition is a bus); and a second interface with a bus connected to the at least one peripheral (Fig. 4, elements 418 and 420).

7. As per claims 30 and 37, Lentz discloses claims 27 and 34, respectively, wherein the modification means further comprises filtering means for filtering the received request for access, according to the at least one predetermined criterion (filtering logic, e.g., combinatorial, sequential gates, flip-flops, etc., are inherent in a hardware system for implementing conditional structures such as those indicated in Fig. 8).

8. As per claims 33 and 40, Lentz discloses claims 27 and 24, respectively, further comprising means for transferring the data modified by said modification means to the physical interface if an application requests an access in a write mode, and for transmitting the data modified by said modification means to the CPU if the application requests the access in a read mode (read/write mode for both the DMA controller and CPU is described in Column 10, lines 35-55).

Allowable Subject Matter

9. Claims 31, 32, 38 and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 2182

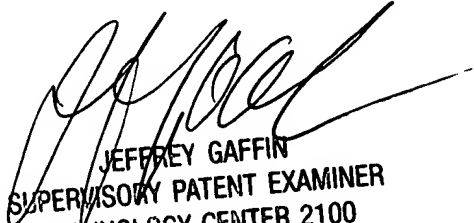
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S Chen whose telephone number is 703-605-0708. The examiner can normally be reached on M-F 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

ASC
01/02/2004


JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100